

## Union Hills WTP Process Control Optimization Project

---

Project Name:	Union Hills WTP Process Control Optimization Project
Location:	Union Hills Water Treatment Plant, Phoenix, AZ.
Owner:	City of Phoenix Water Services Department
Project Construction Cost:	N/A

The City of Phoenix commissioned EIC Engineers, L.L.C. to perform a comprehensive Process Control Optimization Study (PCOS) for the Union Hills Water Treatment Plant. The project involved identifying plant-wide process control concerns, design issues, equipment problems, and any improvement needs for the day-to-day operation and maintenance of the plant and its support facilities.

Over the period of one year the project required assessing a number process equipment enhancements and equipment safety upgrades put forward by key members of the plant's operation and maintenance staff. The project required investigating and addressing these concerns as well as providing recommendations and rough cost estimates.

Some major project electrical, I&C, and programming identified improvements that were implemented include:

- Replace existing aging 5KV cables and terminators;
- Upgrade and add various plant-wide instrumentation for improved reliability and in some cases their related sampling systems;
- Refurbish cathodic protection system on critical equipment and process piping;
- Correct electromagnetic interface (EMI) noises on various plant control signals;
- Upgrade variable frequency drives (VFDs) to existing plant finishing water pumps;
- Upgrade chemical feed pump Silicon Controlled Rectifier (SCR) drives;

